

## ABSTRACT

The invention provides a semiconductor device which performs a write operation of a signal current rapidly to a current input type pixel. Before inputting a signal current, a precharge operation is performed by flowing a large current. After  
5 that, a signal current is inputted to perform the set operation. A predetermined potential can be obtained rapidly as the precharge operation is performed before the set operation. The predetermined potential is approximately equal to a potential after completing the set operation. Therefore, the set operation can be rapidly performed and a write operation of a signal current can be rapidly performed. By using two  
10 transistors, a gate width  $W$  can be long or a gate length  $L$  can be short in the precharge operation or the gate width  $W$  can be short and the gate length  $L$  can be long in the set operation.